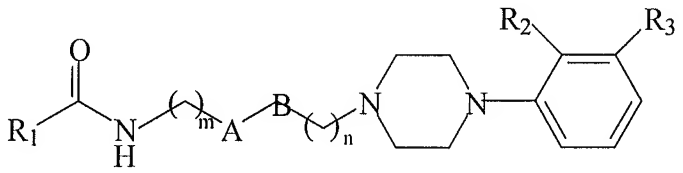
AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound having the formula



wherein

A is cis or trans -CH=CH-, -C≡C-, or cyclohexyl;

B is cis or trans -CH=CH- or absent;

R_1 represents an ~~aromatic substituent which may contain a heteroatom and is a single ring or multiple rings that are linked covalently, or that are linked to a common group, wherein R_1 is optionally substituted on one or more rings, wherein said substituents are selected from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions~~ an indolyl group;

R_2 and R_3 may be independently hydrogen or a halogen, or R_2 alone may be C_1, C_2, or C_3 alkoxy;

m is 1 or 2; and

n is 0, 1, or 2.

2. (Canceled)

3. (Original) The compound of claim 1, wherein B is absent, R_2 and R_3 are both halogen, m is 1 and n is 1.

4. (Original) The compound of claim 1, wherein B is absent, R_2 is lower alkoxy, R_3 is H, m is 1 and n is 1.

5. (Canceled)

6. (Currently amended) A compound according to claim 1

wherein

B is absent;

m = 1;

n = 2;

A is cis or trans -CH=CH-, -C≡C-, or cyclohexyl; and

~~R_1 represents an optionally substituted phenyl group, wherein said substituents are selected from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions, or R_1 represents a heteroaromatic ring, with the exception that R_1 is not triazole or thiadiazole; and~~

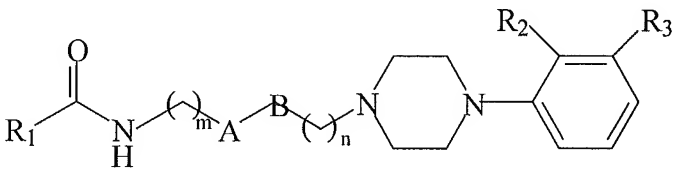
R_2 and R_3 are both chloro.

7. – 11. (Canceled)

12. (Currently amended) The compound of ~~claim 11~~claim 1, in which A is cyclohexyl.

13. (Currently amended) A method of treating cocaine abuse in a subject, comprising the steps of:

administering to the subject an amount of a compound having the formula



wherein

A is cis or trans -CH=CH-, -C≡C-, or cyclohexyl;

B is cis or trans -CH=CH- or absent;

R_1 represents an ~~aromatic substituent which may contain a heteroatom and is a single ring or multiple rings that are fused rings or are linked covalently, or that are linked to a common group, wherein R_1 is optionally substituted on one or more rings, wherein said substituents are selected from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions~~ indolyl group;

R_2 and R_3 may be independently hydrogen or a halogen, or R_2 alone may be C_1, C_2, or C_3 alkoxy;

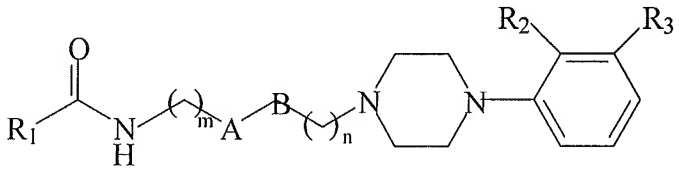
m is 1 or 2; and

n is 0, 1, or 2;

effective to inhibit binding of dopamine to a dopamine D3 receptor in the brain of said subject.

14. (Currently amended) A method for selectively imaging dopamine D3 receptor in the central nervous system of a subject, comprising:

(a) administering a radioactively labeled compound having the formula



wherein

A is cis or trans -CH=CH-, -C≡C-, or cyclohexyl;

B is cis or trans -CH=CH- or absent;

R_1 represents an ~~aromatic substituent which may contain a heteroatom and is a single ring or multiple rings that are fused rings or are linked covalently, or that are linked to a common group,~~

~~wherein R_1 is optionally substituted on one or more rings, wherein said substituents are selected from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions~~ indolyl group;

R_2 and R_3 may be independently hydrogen or a halogen, or R_2 alone may be C_1, C_2, or C_3 alkoxy;

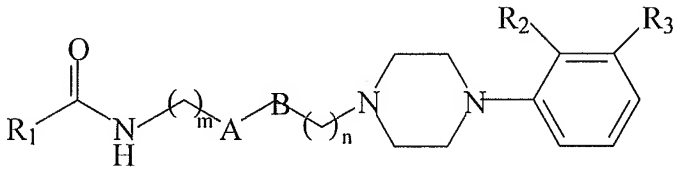
m is 1 or 2; and

n is 0, 1, or 2; to the subject; and

(b) detecting the binding of that compound to dopamine D3 receptors in the central nervous system of the subject.

15. (Currently amended) A method for detecting or monitoring a disease resulting from abnormal distribution and/or density of dopamine D3 receptor in the central nervous system of a subject, comprising:

(a) administering to the subject a detectably labeled compound having the formula



wherein

A is cis or trans -CH=CH-, -C≡C-, or cyclohexyl;

B is cis or trans -CH=CH- or absent;

R_1 represents an ~~aromatic substituent which may contain a heteroatom and is a single ring or multiple rings that are fused rings or are linked covalently, or that are linked to a common group, wherein R_1 is optionally substituted on one or more rings, wherein said substituents are selected~~

~~from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions~~ indolyl group;

R_2 and R_3 may be independently hydrogen or a halogen, or R_2 alone may be C_1, C_2, or C_3 alkoxy;

m is 1 or 2; and

n is 0, 1, or 2;

(b) detecting the binding of that compound to dopamine D3 receptor in the central nervous system tissue;

(c) determining the distribution and/or density of the dopamine D3 receptor in the central nervous system tissue;

(d) comparing the distribution and/or density obtained in (c) with the distribution and/or density of dopamine D3 receptor in a corresponding normal tissue; and

(e) diagnosing a disease state by a difference in the distribution and/or density between the normal tissue and the subject tissue.

16. (Currently amended) The method of claim 14 or 15, wherein the central nervous system tissue is brain tissue.

17. - 19. (Canceled)

20. (Currently amended) A compound according to claim 1, wherein

A is cyclohexyl;

B is cis or trans -CH=CH- or absent;

~~R_1 represents an aromatic substituent which may contain a heteroatom and is a single ring or multiple rings that are fused rings or are linked covalently, or that are linked to a common group,~~

~~wherein R_1 is optionally substituted on one or more rings, wherein said substituents are selected from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions;~~

~~R_2 and R_3 may be independently hydrogen or a halogen, or R_2 alone may be C_1, C_2, or C_3 alkoxy;~~

~~m is 1 or 2; and~~

~~n is 0, 1, or 2.~~

21. (Currently amended) A compound according to claim 1

wherein

A is cis or trans -CH=CH-~~, -C≡C-~~, or cyclohexyl;

B is cis or trans -CH=CH- or absent;

~~R_1 represents an aromatic substituent which may contain a heteroatom and is a single ring or multiple rings that are linked covalently, or that are linked to a common group, or is a group of three fused rings, wherein R_1 is optionally substituted on one or more rings, wherein said substituents are selected from the group consisting of: hydrogen, halogen, amino, nitro, hydroxyl, alkoxy, alkyl, acyl and pyridyl, and said substitution may occur at any of the ortho, meta, or para positions;~~

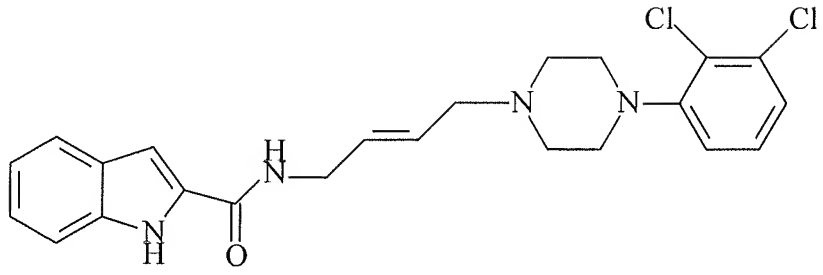
~~R_2 and R_3 may be independently hydrogen or a halogen, or R_2 alone may be C_1, C_2, or C_3 alkoxy;~~

~~m is 1 or 2; and~~

~~n is 0, 1, or 2.~~

22. (Canceled)

23. (Previously presented) The compound of claim 1 that is:



(E)-N-(4-(4-(2,3-dichlorophenyl)piperazin-1-yl)but-2-enyl)-1*H*-indole-2-carboxamide.

24. – 29. (Canceled)

30. (New) The method of claim 13, wherein in the compound of formula I,

A is cis or trans -CH=CH-, or cyclohexyl;

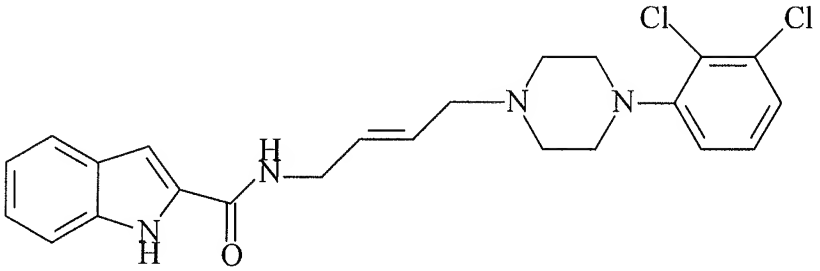
B is cis or trans -CH=CH- or absent.

31. (New) The method of claim 13, wherein in the compound of formula I,

A is cyclohexyl;

B is cis or trans -CH=CH- or absent.

32. (New) The method of claim 13, wherein the compound of formula I is



(E)-N-(4-(4-(2,3-dichlorophenyl)piperazin-1-yl)but-2-enyl)-1*H*-indole-2-carboxamide.

33. (New) The method of claim 14 or 15, wherein in the compound of formula I,

A is cis or trans -CH=CH-, or cyclohexyl;

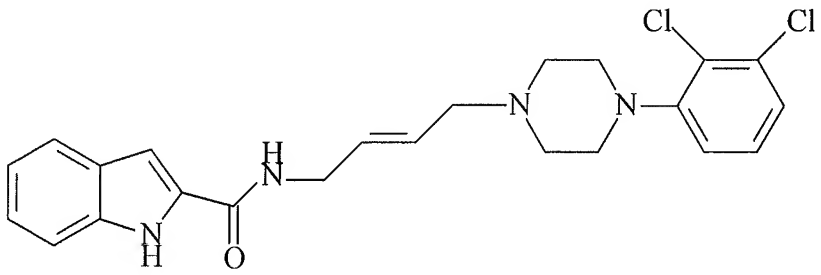
B is cis or trans -CH=CH- or absent.

34. (New) The method of claim 14 or 15, wherein in the compound of formula I,

A is cyclohexyl;

B is cis or trans -CH=CH- or absent.

35. (New) The method of claim 14 or 15, wherein the compound of formula I is



(E)-N-(4-(4-(2,3-dichlorophenyl)piperazin-1-yl)but-2-enyl)-1*H*-indole-2-carboxamide.